

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

LIGHTSIDE TECHNOLOGIES, LLC,

Plaintiff,

v.

VIZIO, INC.,

Defendant.

C.A. No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Lightside Technologies, LLC (“Lightside” or “Plaintiff”), for its Complaint against Vizio, Inc. (“Vizio” or “Defendant”), demands a trial by jury and alleges as follows:

NATURE OF ACTION

1. This is an action for infringement of U.S. Patent Nos. 8,842,727 (“the ’727 patent”) and 6,370,198 (“the ’198 patent”) (collectively the “patents-in-suit”). The ’727 patent and the ’198 patent are based on the inventions of Kinya (“Ken”) Washino.

PARTIES

2. Lightside Technologies is a limited liability company organized under the laws of the state of Texas, with its principal place of business at 700 Lavaca St., Suite 1401, Austin, TX 78701-3101.

3. On information and belief, Defendant Vizio, Inc. is a corporation organized under the laws of California, with its principal place of business at 39 Tesla, Irvine, CA 92618. Upon

information and belief, Vizio, Inc. may be served through Registered Agent Solutions, Inc. at 1701 Directors Blvd., Suite 300, Austin, TX 78744.

JURISDICTION AND VENUE

4. This Court has subject matter jurisdiction over this matter pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. Venue is proper in this District under 28 U.S.C. §§ 1391(c) and 1400(b). Vizio has transacted business in this District and has committed acts of patent infringement in this District.

6. Vizio is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this District. Defendant Vizio has previously admitted that its television products are sold in the State of Texas and the Eastern District of Texas. *Nichia Corporation v. Mary Elle Fashions, Inc. d/b/a Meridian Electric et al.*, 2:16-cv-615, D.I. 10 at 2-3 (E.D. Tex., August 23, 2016).

THE PATENTS-IN-SUIT

7. On September 23, 2014, the United States Patent and Trademark Office duly and legally issued the '727 patent, entitled "Wide-Band Multi-Format Audio/Video Production System With Frame-Rate Conversion," naming Mr. Washino as inventor. A true and correct copy of the '727 patent is attached hereto as Exhibit A.

8. Plaintiff is the owner of all right, title, and interest in the '727 patent.

9. Each claim of the '727 patent is valid and enforceable.

10. On April 9, 2002, the United States Patent and Trademark Office duly and legally issued the '198 patent, entitled "Wide-Band Multi-Format Audio/Video Production System With Frame-Rate Conversion," naming Mr. Washino as inventor. A true and correct copy of the '198 patent is attached hereto as Exhibit B.

11. Plaintiff is the owner of all right, title, and interest in the '198 patent.

12. Each claim of the '198 patent is valid and enforceable.

FACTUAL ALLEGATIONS

13. The inventions embodied in the '727 patent and the '198 patents were invented by Mr. Washino.

14. Mr. Washino is the epitome of the ingenious tinkerer who used inventive skills and a deep understanding of the industry to resolve a long standing problem and succeeded where others had failed.

15. Mr. Washino was born in Aichi Prefecture, Japan, on Feb. 21, 1953. His parents operated a small commercial farm in this rural area. He became interested in communications and electronics at an early age, acquiring an Amateur Ham Radio License by the time he was 13 years old. During his junior high school and high school years, he built a transmitter and receiver from salvaged parts of an old tube TV. From such experiences, he learned the basics of analog communications.

16. In 1974, Mr. Washino found a position as an audio recording engineer with a Japanese documentary film company working in the U.S. This expanded to other production and post-production tasks. During the years that Mr. Washino worked in this business, he gained a working knowledge of film production and of production and post-production processes.

17. After Mr. Washino returned to Japan he earned an Electronics Engineering degree from Nihon Kogakuin Technical College in Tokyo in 1979, and in 1981 acquired a First Class Broadcast Engineering license. By that time, Mr. Washino was already working as a camera design engineer for Ikegami, a Japanese manufacturer of high-end video cameras. In 1985, he was appointed Video Field Sales Engineer and sent to the U.S. This experience enabled Mr. Washino to acquire a deep insight into the competitive market for equipment and services and to appreciate the needs of and problems encountered by video professionals. Mr. Washino then decided to permanently establish himself in the U.S. and formed his own video services company, focused on video production, post-production, and video cassette duplication in New York City.

18. By late 1986, Mr. Washino had acquired the market knowledge, technical skills, and financial resources to begin working on some of the ideas he had to improve efficiency and preserve quality in video field production. He identified the need for a universal camera control system and developed a prototype. Subsequent experimentation with early digital video devices soon led to his 1992 inventions for Video Field Production, Video Monitoring and Conferencing, and PC-Based Audio/Video Production. In 1989 he began working on high-speed video duplication and filed his first patent application in 1993.

19. From then on, Mr. Washino developed a long series of inventions related to video production, post-production and signal distribution that could accommodate the coming digital and High-Definition “multiple format” future.

20. As of October, 2014, Mr. Washino has been granted 20 U.S. patents on inventions for which he is the inventor or co-inventor, and those patents have 14 foreign equivalents.

21. One of those patents is the '727 patent, which is directed toward the field of video production, photographic image processing, and computer graphics. The invention disclosed in the '727 patent comprises a multi-format digital video production method and system capable of maintaining the full bandwidth resolution of the subject material while providing professional quality editing and manipulation of images.

22. The '198 patent is related to the '727 patent, and is also directed toward the field of video production, photographic image processing, and computer graphics. The invention disclosed in the '198 patent similarly relates to a multi-format digital video production method and system capable of maintaining the full bandwidth resolution of the subject material while providing professional quality editing and manipulation of images.

23. Upon information and belief, Vizio is a consumer electronics company that manufactures, *inter alia*, flat-screen televisions.

24. Upon information and belief, Vizio's flat screen television lines include the D-Series, E-Series, M-Series, P-Series, and Reference Series (collectively the "Infringing Products").

The '727 Patent - Method Claims

25. One exemplary method claim is claim 1 of the '727 patent, which includes a method performed by a video apparatus. The method comprises receiving compressed video content from a source. The compressed video content is decompressed to generate uncompressed video content in an internal format having a frame rate of 24 frames per second ("fps") comprising progressive frames of pixel image data having an original pixel resolution. Progressive frames of pixel image data are buffered in a high capacity memory buffer that supports asynchronous random read and write access. The progressive frames of pixel image

data in the buffered progressive frames are processed to perform a frame-rate conversion from 24 fps to a higher output frame rate. A digital HDTV video signal configured to display the video content on an HDTV is output at the output frame rate. The digital HDTV video signal is a progressive signal having a pixel resolution of at least 1920x1080 pixels.

26. Upon information and belief, certain Vizio televisions including, but not limited to, Vizio ultra high definition TV's ("UHDTV") such as the P-series line of TV's, employ technology consistent with at least claim 1 of the '727 patent. Vizio's Infringing Products support a mode called "Pure Cinema Engine," which adjusts the HDMI port's frame rate to show files in their native 24 fps.

27. Upon information and belief, Vizio's Infringing Products include a video apparatus, such as Vizio's UHDTVs, that receives compressed video content from a source.

28. Upon information and belief, Vizio's Infringing Products decompress the compressed video content to generate uncompressed video content in an internal format having a frame rate of 24 fps comprising progressive frames of pixel image data having an original pixel resolution, including by using the "Pure Cinema Engine" mode.

29. Upon information and belief, Vizio's Infringing Products buffer progressive frames of pixel image data in a high-capacity memory buffer that supports asynchronous random read and write access. The high-capacity memory buffer operates in combination with processors contained within Vizio's Infringing Products including, but not limited to, Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine.

30. Upon information and belief, Vizio's Infringing Products output a digital HDTV video signal configured to display the video content on an HDTV at the output frame rate, for example, on the display of Vizio's UHDTVs.

31. Upon information and belief, Vizio's Infringing Products include a digital HDTV video signal that is a progressive signal having a pixel resolution of at least 1920x1080 pixels that is displayed on the screen of its UHD TVs.

The '727 Patent - Apparatus Claims

32. One exemplary apparatus claim is claim 11 of the '727 patent, which includes a video apparatus that comprises a means for at least one of receiving or retrieving compressed video data. The apparatus also includes a high-capacity memory buffer supporting asynchronous random read and write access. Digital signal processing circuitry and a graphics processor are also included. The apparatus is configured to decompress compressed video content that is received or retrieved by the apparatus using at least one of the digital signal processing circuitry and the graphics processor to generate uncompressed video content in an internal format having a frame rate of 24 fps comprising progressive frames of pixel image data having an original pixel resolution. The apparatus is also configured to buffer progressive frames of pixel image data in the high-capacity memory buffer. The apparatus also processes the progressive frames of pixel image data in the buffered progressive frames using at least one of the digital processing circuitry and the graphics processor to perform a frame-rate conversion from 24 fps to a higher output frame rate. A digital HDTV video signal configured to display the video content on an HDTV is output at the output frame rate. The digital HDTV video signal is a progressive signal having a pixel resolution of at least 1920x1080 pixels.

33. Upon information and belief, Vizio's Infringing Products include a means for at least one of receiving or retrieving compressed video data using, for example, HDMI ports or Dual-band Wi-Fi standard 802.11ac.

34. Upon information and belief, Vizio's Infringing Products include a high-capacity memory buffer that supports asynchronous random read and write access. The high-capacity memory buffer operates in combination with processors contained within Vizio's Infringing Products including, but not limited to, Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine.

35. Upon information and belief, Vizio's Infringing Products also include digital signal processing circuitry, such as Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine.

36. Upon information and belief, Vizio's Infringing Products include a graphics processor, such as Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine. Upon information and belief, Vizio's V6 six-core processor includes a quad-core GPU and a dual-core CPU for advanced graphics processing.

37. Upon information and belief, Vizio's Infringing Products are configured to decompress video content that is received or retrieved by the apparatus using at least one of the digital signal processing circuitry and the graphics processor to generate uncompressed video content in an internal format having a frame rate of 24 fps comprising progressive frames of pixel image data having an original pixel resolution. Vizio's P-Series, for example, uses the "Pure Cinema Engine" mode to adjust the HDMI port's frame rate to show films in their native 24 fps.

38. Upon information and belief, Vizio's Infringing Products buffer progressive frames of pixel image data in the high-capacity memory buffer. The high-capacity memory buffer operates in combination with processors contained within Vizio's Infringing Products

including, but not limited to Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine.

39. Upon information and belief, Vizio's Infringing Products process the progressive frames of pixel image data in the buffered progressive frames using at least one of the digital processing circuitry and the graphics processor to perform a frame-rate conversion from 24 fps to a higher output frame rate. Vizio's Infringing Products include Vizio's V6 six-core processor and Vizio's VM50 Ultra HD motion and picture-processing engine. Upon information and belief, Vizio's V6 six-core processor includes a quad-core GPU and a dual-core CPU. Vizio's Infringing Products use the "Pure Cinema Engine" to adjust the HDMI port's frame rate to show films in their native 24 fps.

40. Upon information and belief, Vizio's Infringing Products output a digital HDTV video signal configured to display the video content on an HDTV at the output frame rate, for example, on the display of Vizio's UHD TVs.

41. Upon information and belief, Vizio's Infringing Products include a digital HDTV video signal that is a progressive signal having a pixel resolution of at least 1920x1080 pixels that is displayed on the screen of its UHD TVs.

42. Vizio does not have a license to the '727 patent and is not otherwise authorized to practice the inventions claimed under the '727 patent.

The '198 Patent

43. One exemplary method claim is claim 1 of the '198 patent, which includes a method of producing a video program. The method includes receiving an input video program in an input format, and converting the input video program into a digital production format by sampling the input program at a sampling frequency in excess of 18 megahertz. A high-capacity

digital video storage means is also provided and is equipped with an asynchronous program recording and reproducing capability to perform a frame-rate conversion. The video program is processed in the production format using the high-capacity video storage means on a selective basis to output a version of the video program having a desired frame rate and image dimensions in pixels.

44. Upon information and belief, certain Vizio televisions including, but not limited to, Vizio's Razor LED Smart TVs such as the Vizio 80" Class Razor LEDTM Smart TV with Theater 3D, employ technology consistent with certain claims of the '198 patent. Vizio's Infringing Products employ "Smooth Motion" technology that produces a video program.

45. Upon information and belief, Vizio's Infringing Products receive an input video program in an input format. For example, Vizio's Infringing Products support receiving input video content via Internet streaming, using the VIZIO Internet Apps PlusTM feature. Alternately, Vizio's Infringing Products have a built in tuner, as well as HDMI, component, composite, and USB inputs that allow input video programs to be received in an input format.

46. Upon information and belief, Vizio's Infringing Products convert the input video program into a digital production format by sampling the input program at a sampling frequency in excess of 18 megahertz. Upon information and belief, Vizio's HDTVs, for example, support inter-frame interpolation and intra-frame interpolation. For video resolutions above 480i, Vizio's Infringing Products sample at a frequency in excess of 18 megahertz.

47. Upon information and belief, Vizio's Infringing Products provide a high-capacity digital video storage means equipped with an asynchronous program recording and reproducing capability to perform a frame-rate conversion. For example, upon information and belief, the

Vizio GV47L 47" LCD HDTV includes numerous high-capacity digital video storage means including, but not limited to, SDRAM- DDR and Flash memory.

48. Upon information and belief, Vizio's Infringing Products process the video program in the production format using the high-capacity video storage means on a selective basis to output a version of the video program having a desired frame rate and image dimensions in pixels. Vizio's Smooth Motion technology, upon information and belief, is one way that Vizio accomplishes its frame rate conversion.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 8,842,727

49. Plaintiff repeats, realleges, and incorporates the allegations of paragraphs 1-48 as if set forth fully herein.

50. On information and belief, Vizio had knowledge of the '727 patent since April 14, 2015, when it was presented with the opportunity to purchase a patent portfolio that included the '727 patent.

51. Vizio has infringed and is currently infringing at least claims 1-2, 4, 11-12, and 14 of the '727 patent, either literally or under the doctrine of equivalents, in violation of 35 U.S.C. § 271 through its making, using, selling, offering for sale, and/or importing into the United States the Vizio Infringing Products including, but not limited to, its P-Series product line.

52. Vizio's infringement has been without the express or implied license of the '727 patent.

53. Plaintiff has been damaged by Vizio's infringement of the '727 patent.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 6,370,198

54. Plaintiff repeats, realleges, and incorporates the allegations of paragraphs 1-53 as if set forth fully herein.

55. On information and belief, Vizio had knowledge of the '198 patent since April 14, 2015, when it was presented with the opportunity to purchase a patent portfolio that included the '198 patent.

56. Vizio has infringed and is currently infringing at least claims 1-4 of the '198 patent, either literally or under the doctrine of equivalents, in violation of 35 U.S.C. § 271 through its making, using, selling, offering for sale, and/or importing into the United States the Vizio Infringing Products including, but not limited to, its M-Series and P-Series product lines.

57. Vizio's infringement has been without the express or implied license of the '198 patent.

58. Plaintiff has been damaged by Vizio's infringement of the '198 patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court enter judgment:

- (a) That Vizio infringes one or more claims of the '727 patent, either literally or under the doctrine of equivalents;
- (b) That Vizio infringes one or more claims of the '198 patent, either literally or under the doctrine of equivalents;
- (c) That Plaintiff is entitled to monetary damages resulting from Vizio's acts of infringement in accordance with 35 U.S.C. § 284 in an amount to be determined by the jury;

- (c) That this case is exceptional, justifying an award to the Plaintiff of attorneys' fees and costs incurred in this action, pursuant to 35 U.S.C. § 285;
- (d) Awarding Plaintiff's prejudgment interest and costs pursuant to 35 U.S.C. § 284;
- (e) That Plaintiff is entitled to a permanent injunction against Vizio and its respective officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, successors, assigns, and all others acting in active concert therewith from infringement of the '727 patent and the '198 patent; and
- (f) Granting Plaintiff such other and further relief as the Court deems proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38, Plaintiff demands trial by jury on all issues so triable in this case.

DATED: November 9, 2016

Respectfully submitted,

/s/ Elizabeth L. DeRieux

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